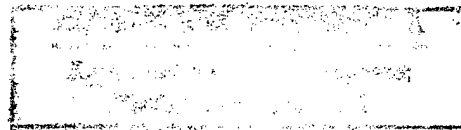


263138

JPRS 81488

9 August 1982



Worldwide Report

ENVIRONMENTAL QUALITY

No. 363

19980914 133

FBIS

FOREIGN BROADCAST INFORMATION SERVICE

6
56
A04

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service, Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semi-monthly by the National Technical Information Service, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

9 August 1982

WORLDWIDE REPORT ENVIRONMENTAL QUALITY

No. 363

CONTENTS

WORLDWIDE AFFAIRS

'Acid Rain' Conference Encouraged by EC Countries' Initiative (DAGENS NYHETER, 30 Jun, 1 Jul 82).....	1
EC Countries: Accept Geneva Convention, by Thomas Lerner	
Quebec Minister Sees Emissions Reduction, by Thomas Lerner	
Paper Comments on Conference, Editorial	

ASIA

AUSTRALIA

Franklin River Dam Looming Larger as National Issue (THE AUSTRALIAN, 7 Jun 82, THE AGE, 7 Jun 82).....	5
Canberra Voter Write-Ins, by Geoff Sorby, et al. Editorial on Blockage of Funds Increase in Opposition, by Ken Haley	
Seismic Oil Surveys Said To Endanger National Park Lands (THE COURIER-MAIL, 1 Jun 82).....	8
Public Participation in Park Planning Called Precedent (David Hancock; THE AUSTRALIAN, 3 Jun 82).....	9
Chemical Dumping Loophole, Pesticide Import Opposed (THE COURIER-MAIL, 4 Jun 82).....	11

Conservationists Fight Proposed Yarra River Power Line (THE AGE, 2 Jun 82).....	12
Call for Environmental Study, by Paul Robinson Editorial Comment	
Briefs	
Conservation Campaign	14
Salt-Land Reclamation	14
INDIA	
Changed River Courses Bring Erosion Dangers (THE STATESMAN, 3 Jul 82).....	15
Briefs	
Mountain Range Ecology	16
Erosion Near Farraka	16
PEOPLE'S REPUBLIC OF CHINA	
Advances Reported in Control of Urban Pollution (Deng Anxu; SICHUAN RIBAO, 8 Jun 82).....	17
Chemical Industry Efforts To Control Water Pollution Sketched (SICHUAN RIBAO, 8 Jun 82).....	19
Semiconductor Plant Solves Its Pollution Problems (Ou Laiteng, Deng Xiaoi; SICHUAN RIBAO, 8 Jun 82).....	21
PHILIPPINES	
Briefs	
Coastal Waters Losing Marine Life	22
LATIN AMERICA	
PERU	
Pollution Threatens Ocean, Expert Says (EL COMERCIO, 1 Jul 82).....	23
NEAR EAST AND NORTH AFRICA	
EGYPT	
Effluent Discharge Into Nile River at Aswan (Muwaffaq Abu-Nabil; AL-AHRAM, 6 Jun 82).....	25

LIBYA

Briefs

Water Institute	27
Seedlings Planted	27

SUB-SAHARAN AFRICA

LIBERIA

Erosion in New Krutown, Other Areas Intensifying (DAILY OBSERVER, 8 Jul 82).....	28
---	----

SOUTH AFRICA

Briefs

Oil-Leaking Tanker	29
--------------------	----

TANZANIA

Minister Notes Spread of Soil Erosion to Ten Regions (Mkumbwa Ally; DAILY NEWS, 13 Jul 82).....	30
--	----

ZIMBABWE

Quarter of Nation's Population Face Starvation Because of Drought (THE HERALD, 10 Jul 82).....	31
Drought Puts Thousands in Farm Jobs (THE SUNDAY MAIL, 11 Jul 82).....	33
Army Called To Ease Drought Crisis (THE CITIZEN, 19 Jul 82).....	34
Drought Relief Provided to Beitbridge, Plumtree Districts (THE HERALD, 15 Jul 82).....	35
Project To Enlarge Sebakwe Dam Reported (THE HERALD, 15 Jul 82).....	36
Briefs	
Drought Hit Co-op Farms	37

WEST EUROPE

GREECE

Entire Khalkis Area Reported Polluted (TA NEA, 2 Jul 82).....	38
--	----

Bar Association Issues Statement on Pollution (TA NEA, 1 Jul 82).....	39
Attiki Industries To Convert to Gas (TA NEA, 1 Jul 82).....	40
Briefs	
Attiki Reforestation Statistics	41
NORWAY	
Acidification of Waters Concerns Researcher, Official (Eivind Fossheim; AFTENPOSTEN, 14 Jul 82).....	42
Countermeasures To Reverse Pollution Demanded Ministry Official Sees Worsening Situation	
SWEDEN	
Waters Acidification Traced Partly To Waste Water Facilities (Ingvar Andersson; DAGENS NYHETER, 4 Jul 82).....	46
Tree Growers Protest Bill To Protect Deciduous Forests (Cecilia Steen-Johansson; DAGENS NYHETER, 20 Jun 82)....	48

'ACID RAIN' CONFERENCE ENCOURAGED BY EC COUNTRIES' INITIATIVE

EC Countries: Accept Geneva Convention

Stockholm DAGENS NYHETER in Swedish 30 Jun 82 p 11

[Article by Thomas Lerner]

[Text] An unexpected victory was won at Environment 82, the international conference on acidification held in Stockholm.

On Tuesday a spokesman for all the EC countries announced that they intended to approve the Geneva Convention prohibiting one country from polluting another as a result of its emissions.

Later delegates from Austria and Switzerland announced that their governments also intended to adopt the convention.

This provided the 24 signatures required for the convention to take effect.

The Geneva Convention is not binding on the countries that approve it, however. The countries merely shall "strive to limit and, as far as possible, gradually decrease and prevent air pollution."

More and More Hit

For many years acidification was a Scandinavian problem. Other countries refused to admit that there was a connection between sulfur emissions and dead fish and damaged forests in Norway and Sweden.

In recent years, however, more and more countries have been hit by the harmful effects of acidification. In West Germany, for example, one fifth of all spruce forests have been killed or seriously damaged by sulfur fallout.

The West German interior minister Gerhard Baum spoke pointedly at Environment 82. He stressed that countries signing the Geneva Convention must put the convention into practice.

"All countries must obtain the legal means necessary to conduct an environmental policy that will create cleaner air," Gerhard Baum said.

Soviet Union Missing

He also stated that the present economic slump in many industrialized countries must not halt the battle against acidification.

At Environment 82 representatives from many Eastern countries, including the Soviet Union, were absent. Some participants believed that the conference was less significant because the Eastern countries were not represented.

"Both the Soviet Union and Poland are among the countries that release large quantities of sulfur into the atmosphere and, therefore, must be present at international discussions if there is to be any real improvement," one participant told DAGENS NYHETER.

Quebec Minister Sees Emissions Reduction

Stockholm DAGENS NYHETER in Swedish 30 Jun 82 p 11

[Article by Thomas Lerner]

[Text] Marcel Leger is environment minister in the Canadian province of Quebec. He has brought a plan to the acid-rain conference that he hopes will reduce sulfur emissions in Quebec by 50 percent.

"In cooperation with a semistate-owned company and two private mining companies, we have developed a process for utilizing waste from two different industries," he said.

In the method he described, asbestos waste from a mine in southern Quebec would be transported 600 km to the north to a smeltery where the Nuranda Co. releases enormous quantities of sulfur dioxide.

By mixing the sulfur dioxide with the asbestos waste, a third substance is formed--magnesium sulfide--that can be used to produce synthetic fertilizer and so-called factory stone.

"We hope to allocate \$100 million for an industrial-scale operation before the end of the year," Marcel Leger said. "We need the political will to overcome the acidification problem."

Not Sweden

The method developed in Quebec has no future in Sweden. We use hardly any asbestos at all and have no mines.

"If we are to stop acidification, our politicians must play an active role," Marcel Leger said. "This is one example and perhaps the method can be developed for application in other industrial processes for other waste materials."

Paper Comments on Conference

Stockholm DAGENS NYHETER in Swedish 1 Jul 82 p 2

[Editorial by CW]

[Text] International environmental law made a breakthrough during the 1970's. Finally it was realized that pollution of the environment did not stop at national boundaries. Many important environmental conventions were adopted on a bilateral, Nordic, European, and global basis.

When Sweden presented a report on the acidification problem at the 1972 international environmental conference in Stockholm, most people shrugged their shoulders. The ravages of acid rain were not yet seen as a problem worthy of international cooperation.

Because of the lime-deficient bedrock in Norway and Sweden, however, the consequences of acidification had to be considered. The Nordic countries called for an international convention on long-distance air pollution across national boundaries.

In late 1979, 33 member nations of the United Nations economic commission on Europe signed the convention proposed by the Nordic countries. Before that time, however, cooperation already was underway within the framework of the European system for measuring long-distance air pollution (EMEP). In Sweden it is estimated that three fourths of the acid rain originates from other countries and one fourth from domestic sources of pollution.

Environment 82, which concluded on Wednesday in Stockholm, was not as successful as the optimists had believed, although it was not as useless as the pessimists had feared. The political result was that the convention on long-distance air pollution across national boundaries will take effect on 1 January 1983. When the conference convened only 13 nations had adopted the convention, but during the conference 11 nations announced their intention of ratifying the convention in the near future.

Another important achievement was the agreement on a maximum permissible value for acid rain. Damage caused by nitrogen emissions also was discussed. The final document of the conference stated that an international program of cooperation to reduce sulfur emissions should be developed. The United States, Great Britain, West Germany, and France, however, were less than enthusiastic about establishing a timetable for limiting sulfur and nitrogen levels. The United States also wanted a higher permissible value for sulfur.

At the conclusion of the conference, Agriculture Minister Anders Dahlgren stated that the "high-stack technology" now was out. The trend now would be toward steps that limit emissions. Of course, the final document did not contain everything desired by the countries hardest hit by acid rain such as Canada, Norway, and Sweden, but in return the countries responsible for

most of the sulfur emissions went further than they originally had intended.

Now it will be possible for Sweden to negotiate individually with West Germany and France on sulfur pollution with support from the convention on long-distance air pollution across national boundaries. This should occur without delay.

9336

CSO: 5000/1234

FRANKLIN RIVER DAM LOOMING LARGER AS NATIONAL ISSUE

Canberra Voter Write-Ins

Canberra THE AUSTRALIAN in English 7 Jun 82 p 3

[Article by Geoff Sorby, Stephen Taylor and David Hancock]

[Excerpts]

THE conservation lobby scored its biggest victory at the weekend when more than 40 per cent of voters in the ACT wrote "no dams" on their ballot papers in local elections.

Almost 30,000 people wrote the words on voting slips for the ACT House of Assembly elections. Scrutineers said 45 per cent were Labor Party voters and 35 per cent Liberal voters.

The man behind the no-dams campaign, Dr Bob Brown, said the outcome gave "national status" to the Franklin River issue.

"It is the clearest indication the Fraser Government has received that Australia, as a nation, is concerned about south-west Tasmania," he said.

"It can't be ignored. There is a national fight against the scheme."

But the Premier of Tasmania, Mr Gray, said the vote would not alter his Government's decision to go ahead with the plan to build a dam on the Gordon River, below the Franklin.

The Tasmanian Wilderness Society has established offices in six marginal Federal electorates in Victoria as part of a campaign to press the Federal Government into refusing

support for the Tasmanian scheme.

The society plans to do the same in NSW in the run-up to the next Federal election.

Dr Brown warned the Prime Minister, Mr Fraser, that if he supported Loans Council backing for the dam he would run the risk of an electoral backlash.

"People will realise there will be Liberal bulldozers moving in on the Franklin and that will be reflected at the national polling booths," he said.

The Tasmanian Wilderness Society, which had at least two scrutineers at every booth, said support for the no-dams campaign had come from all sections of the community, regardless of party affiliation.

Their figures were corroborated by scrutineers for all parties and by some presiding officers.

"All our 150 polling booth helpers said that voters of all parties were well aware of the economic lunacy of spending over \$1000 million for 155MW of power," said a no-dams campaign organiser.

Editorial on Blockage of Funds

Melbourne THE AGE in English 7 Jun 82 p 13

[Text]

THE Prime Minister has finally laid to rest any doubts about the Federal Government's attitude to financing the controversial Gordon-below-Franklin dam in south-west Tasmania. With the Tasmanian election now out of the way, Mr Fraser made it clear at the National Press Club on Wednesday that there was no prospect of the Tasmanian Government being allowed to undertake a new infrastructure borrowing for the dam. In response to last week's announcement by the new Tasmanian Premier, Mr Gray, that he would seek such approval at the coming Loan Council meeting, Mr Fraser indicated that the freeze on new infrastructure loans would remain in force for all States in order to minimise the pressure on interest rates. If Tasmania wanted to build the dam from its general loan funds, he added, it was free to do so.

If hardly a ringing assurance, it is nonetheless a welcome one. First, because if the freeze were ended for Tasmania, which is already borrowing heavily for the Pieman River power scheme through infrastructure loans, it would have to be ended for all States. As Mr Fraser pointed out, that would only add to the pressure on interest rates when it should be a top priority to bring them down.

Second, the continuation of the freeze considerably limits the Tasmanian Government's ability to pursue its irresponsible plans to flood one of Australia's most beautiful areas and one of its most important archaeological sites. Tasmania is in a parlous financial situation, partly because of the spiralling cost of the

Pieman scheme, and 52 per cent of its capital spending is already devoted to electricity. It faces a Budget deficit this year of almost \$40 million, and stands to lose another \$69 million next year — almost 10 per cent of its Budget revenue — if the Grants Commission's review of tax sharing entitlements is accepted.

The growth in Tasmania's electricity demand has slowed almost to a standstill, and Federal experts have said publicly the State needs no new power scheme until 1995. In this situation, it would require financial incompetence for the State Government to cut spending on real social needs in order to give the Hydro-Electricity Commission a still larger share of a shrinking cake. It is one thing to pass a bill approving construction of the dam. It is another to allocate funds to a scheme when you do not need it and cannot afford it.

Mr Fraser has effectively disposed of the matter from the Federal Government's plate for the time being. But ultimately it will return there, and he should prepare for the day when it can no longer be put off solely on economic grounds. At some point the wider Australian public would welcome an assurance that no infrastructure borrowings for the dam will be allowed without a full Federal inquiry into the environmental impact and the alternatives for meeting future power demands. The Prime Minister should also look seriously at ways in which the Federal Government can assist Tasmania in establishing a national park of world importance in the south-west, as his party promised in the 1975 election campaign. Its mountain wilderness is, as he has said, an irreplaceable asset.

Increase in Opposition

Melbourne THE AGE in English 7 Jun 82 p 3

[Article by Ken Haley]

[Text]

The leader of the Australian Democrats, Senator Don Chipp, said yesterday he would obstruct the progress of bulldozers to prevent the construction of a dam on Tasmania's Franklin River.

"I personally would be prepared to put my body in the way of bulldozers if it comes to that, provided it was done peacefully within the law," Senator Chipp said.

"It would be the first time in my political life that I had put myself on the line like that for something I believed in."

His solemn mood at the thought of a mass occupation defying the might of the Hydro-Electricity Commission in the heart of the wilderness, contrasted with the cheer bubbling up in the crowd behind him.

Hardware Street, a grimy city lane, was bridged by a canvas-and-wire platypus — twice the height of the accompanying crowd of daults who foot-tapped to a bush band called Black Sheep and three times as tall as the children with painted faces who gazed on it in awe.

The occasion marked the arrival of the Tasmanian Wilderness Society on the mainland, and the opening of its Melbourne branch office.

It also signalled that a local energy-ecology debate had become a national political and judicial struggle, as the director of the wilderness society in Tasmania,

Dr Bob Brown, made clear.

"Instead of the river being won as the result of a State election it now must be won at the centre of a national and international furor," Dr Brown said.

"If there is one thing that is going to meld all Australians — black and white, young and old Australian — it is going to be this emerging pride in this magnificent heritage we do have.

"The HEC's will to dominate Tasmania will bring on the demise of Mr Gray as surely as it has brought about a high turnover of Tasmania's other political leaders.

"It will threaten the existence of Federal Governments. This will be a major national issue in the next elections.

"We need to bombard the politicians of Canberra with our indignation that they should consider allowing any loan moneys to go to destroy what they themselves have listed as world heritage."

Dr Brown later told 'The Age' that the Franklin River dam swell could burst upon the Federal Government if just 1000 people in each marginal seat voted Labor or Democrat because of Liberals' failure to prevent the inundation of the valley.

"We are setting up branches in six marginal seats in Victoria and more in New South Wales," he added.

Then there was Section 30 of the Australian Heritage Council Act which forbade a Minister to

harm the natural estate except where "there are no prudent or feasible alternatives".

Alternatives? Senator Chipp ("I'm the only Federal politician ever to have rafted down the Franklin") talked of photo-voltaic solar cells cheap enough by 1992 to gather the energy of the sun and distribute it throughout the Apple Isle.

He spoke of calculations that all Tasmania's power needs could be met by a one-fifth reduction in electricity use through simple conservation measures and of the

"monstrous" veto 100,000 Tasmanian voters could exercise.

Both speakers basked in the afterglow of the ACT elections the previous day in which 41 per cent of the voters marked 'No Dams' on their ballot papers.

Senator Chipp read the lesson: "Politicians are only sensitive to one thing: votes. And if they get 100 individually composed letters from their constituents they will think the biggest tidal wave of all time is going on out there.

"Don't waste too much shot and shell on State politicians. I wouldn't waste too much time writing to Labor politicians because they're not in power. I wouldn't waste too much time writing to Country Party politicians because that's a waste at any time.

"Write to the Liberals, write to your senators. Make them know you're there. Make them know you care."

CSO: 4700/1608

SEISMIC OIL SURVEYS SAID TO ENDANGER NATIONAL PARK LANDS

Brisbane THE COURIER-MAIL in English 1 Jun 82 p 9

[Text]

Seismic surveys by oil companies could damage Fraser Island, Lamington and Coolool National Parks, the Queensland Wildlife Preservation Society director, Mr Don Henry, said yesterday.

He said two letters of complaint had been sent to the Premier, Mr Bjelke-Petersen, following the clearing of a 19 km track through the Southwood National Park, 140 km south-west of Dalby, late last year.

The bare track, 8 metres wide, was cut by a petroleum company for drilling and survey equipment which passed down the line after each seismic blast, Mr Henry said.

He did not know the name of the company which undertook the tests.

"But there seems to be nothing we can do to stop it," he said.

"Although the Mining Act prevents national parks from being touched, there is no such provision

in the Petroleum Act.

"The Petroleum Act was passed in 1923 which means any national park that has been established since that date is in danger of similar destruction."

The Queensland National Parks and Wildlife Service deputy director, Mr Clive Price, said he was "no happier than anyone else" about the Southwood damage.

"However petroleum can be drilled for in national parks and the best thing to do is look for ways in which it can be done with least destruction to the environment.

"In fact the drillers at Southwood complied with everything asked of them.

"The land must be cleared around every blast because even the sound of a fluttering leaf can confuse the seismic meter.

"I've had a number of complaints from environmental groups but we'll just have to make do the best we can."

CSO: 5000/7552

PUBLIC PARTICIPATION IN PARK PLANNING CALLED PRECEDENT

Canberra THE AUSTRALIAN in English 3 Jun 82 p 9

[Article by David Hancock]

[Text]

OVER the past three years more than 50,000 Australians have argued over how the nation's alpine national park should be run.

The results went before the NSW Government this week, for release within two weeks.

The debate has been long and vehement, but this time a State government has actually encouraged argument and used it as the basis of a park management plan, a precedent which could revolutionise the planning of national parks in this country.

The issues involved in the development of a new plan for Kosciusko National Park, one of six designated UNESCO world biosphere reserves, have been complex and occasionally volatile, but in the interests of an acceptable, workable plan, the State Government has preferred public input to bureaucratic decision-making.

The NSW Minister for Planning and Environment, Mr Bedford, is now considering the completed plan.

Just how successful large-scale public participation in the planning of our national parks will be gauged by the public reaction to it.

The park is a classic case of commerce versus conservation — big developers want to open it up to the ski industry; conservationists argue that Kosciusko's delicate ecological balance could not support the development.

For the first time in Australia, the process of drawing the plan together went well beyond the minimal statutory requirements.

It was an example of a land management agency (the NSW National Parks and Wildlife Service) attempting to come to grips with complex and sometimes contradictory responsibilities, and seeking to involve a wide range of community interests in the process.

The process broke new ground, partly because of its emphasis on public participation, and partly because the planners were prepared to tackle long-standing and controversial management problems head-on.

Instead of taking a traditional, centralised approach to the job, a serious attempt was

made to involve all the field managers, including rangers, because the Parks and Wildlife Service believed the wide practical experience they possessed was essential.

The service believed that field managers involved in the plan would be more committed to its implementation than if it were imposed from above.

The public process included seminars, a flow of information between hundreds of people and the management committee, a free mail list, community meetings, and the issue of planning statements and written submissions.

In 1979, more than 600 submissions were received for a draft plan of management. Further comment was encouraged when the draft was published in May 1981, and another 700 were tendered.

More than 50 per cent were

from individuals, but of the rest most were from organisations representing thousands of individuals and companies. There were scores of petitions from clubs and social groups; it was the biggest public response ever to a national park plan of management.

The NSW legislation is one of relatively few national park statutes in Australia to require public participation in the preparation of plans of management.

NSW, South Australia, Tasmania, the Northern Territory and the Commonwealth all recognise the need for at least some guaranteed public participation in national park planning, if nothing else to ensure public review of hasty political decisions and limit the scope of political patronage and resource allocation not in line with public expectations.

Victoria, Queensland, Western Australia and the ACT fail to provide for any formal public participation in or review of planning or management proposals.

This is usually defended on the grounds of "flexibility" — the agency doesn't want to be limited by statutory procedures.

That is not to say that the States in question do not conduct programs of public participation, but rather it highlights the dangerous area into which a minister can legally proceed without any public involvement on issues.

Perhaps one of the best examples of public participation in national parks anywhere in the world is in Canada, where planning is decentralised at a regional level, using a flexible process defined in a corporate guideline.

The Parks Canada policy is to involve the public in all steps in the planning process and in recent years it has emphasised establishing contact with the public early in the process.

In Australia there are four recognised stages for public involvement undertaken in varying degrees by every State and the Commonwealth: a need for management plans, public involvement before the draft, reviewing the draft and the availability of the final plan.

Queensland is the only State which does not require a management plan under parks legislation and only two governments, the Commonwealth and the South Australian are required by law to seek the involvement of the public before undertaking a draft plan.

The Queensland, West Australian and Victorian Governments are not statutorily bound to involve the public in reviewing the draft nor are they required to make the final plan available to the public for comment.

The ACT falls into the same category as Queensland and is not legally bound to adhere to the recognised steps.

Admittedly, the planning process for Kosciusko National Park was long and involved. It was also expensive, frustrating and initially divisive.

But an important factor emerged--that people do want to play a role in determining their recreational areas and preserving their national heritage.

Many believe the "Kosciusko procedure" will form a blueprint for future national parks planning.

CSO: 5000/7552

CHEMICAL DUMPING LOOPHOLE, PESTICIDE IMPORT OPPOSED

Brisbane THE COURIER-MAIL in English 4 Jun 82 p 2

[Text]

The Queensland Trades and Labor Council will approach both the State and Federal Governments to close a loophole in legislation which allows chemicals banned in other countries to be dumped for sale in Australia.

The council general secretary, Mr Fred Whitby, said yesterday the TLC would also be calling on the governments to disallow registration of the pesticide Mirex, which was banned in the United States.

Mirex was used against fire ants and termites. Mr Whitby said its health effects were known to include cancer and birth deformities, and the substance was also known to accumulate in food chains and human fat tissue.

After years of research in the United States, the use of the compound was banned in 1976, according to a combined study from the Australian Council of Trade Unions and the Victorian Trades Hall Council.

"Stocks of the bait built up by the

manufacturer, Allied Chemicals Ltd, were not destroyed and the report indicates that it is likely that these stocks are finding their way on to markets less stringently regulated than those in the United States, such as Australia through Darwin.

"The report advises that Mirex can be used in Australia perfectly legally, although it is not registered for use in any state because of an enormous loophole in the Australian pesticides control system," Mr Whitby said.

The chemical could be bought openly in the Northern Territory or in the Australian Capital Territory and then used in other states even though it was not registered.

This loophole was a cause of public concern because it facilitated the dumping of unsafe products in Australia and undermined the business of pesticide suppliers who followed the rules and refused to handle unregistered products.

Mr Whitby said application for registration of Mirex had been made in both Queensland and Western Australia.

CSO: 5000/7552

CONSERVATIONISTS FIGHT PROPOSED YARRA RIVER POWER LINE

Call for Environmental Study

Melbourne THE AGE in English 2 Jun 82 p 17

[Article by Paul Robinson]

[Text]

Conservation groups asked the State Government yesterday to assess the environmental impact of a proposed new power line from Brunswick to Richmond.

The 8.8-kilometre high-voltage line would run along the Yarra and the Merri Creek.

The Conservation Council of Victoria and the Merri Creek Coordinating Committee said yesterday that they would fight the SEC proposal.

Under the plan, 25 40-metre towers and 22 30-metre poles would be erected. They would be much higher than the poles for an existing lower voltage line, which would be removed.

The secretary of the Merri Creek group, Mrs Anne McGregor, said the steel towers would limit severely the options available to the designers of a pedestrian and bicycle path which is planned for the creek valley.

She said seven local councils and the Department of Youth,

Sport and Recreation had given more than \$45,000 to design the path, which was to be built to coincide with Victoria's 150th celebrations. The presence of the power towers "would rather ruin all that", she said.

"I understand the SEC have been planning this since 1968 but in those days the creek was considered a wasteland and a dumping ground for unwanted uses, like power lines and old cars — but things have changed," she said.

Mrs McGregor said the committee would demand an environmental assessment of the plan because the line intruded on scarce and valuable parkland in the northern suburbs; it would limit tree planting, and its presence was aesthetically unacceptable.

The project officer for the Conservation Council, Mr Tony Faithful, said yesterday that the SEC had to produce figures for more acceptable alternatives

to allow the public and nearby residents affected by the plan to assess it for themselves.

"They (the SEC) sent us a letter saying the new line was necessary to improve the security of supply to the eastern section of the city," he said. "Now that is not an adequate explanation by any means and it does not consider other possibilities like subterranean or submarine cables."

The assistant director (assessments) at the Department of Conservation, Mr Peter Dunk, said yesterday that talks were being held with the SEC next week about the plan, although the department had been aware of the proposal "a long time ago". "I don't think we were very concerned originally but we might be wrong," he said.

Mr Dunk said the department would wait until the SEC obtained comments from local councils and other public agencies involved in the new line before examining the plan. "But it's not over yet — not by a long shot," he said.

[Editor's Note: THE AGE of Melbourne, on 4 Jun 1982, page 6, reports that the Victorian state government has suspended further action on the proposed power line pending completion of an environmental impact study:

"The State Government will request an environmental impact study of the proposed new power line from Brunswick to Richmond. Speaking in the absence of the Minister for Minerals and Energy, Mr White, the Minister for Police and Emergency Services, Mr Mathews, told Parliament that no further action would be taken on the proposed power line until proper consultation had taken place."]

Editorial Comment

Melbourne THE AGE in English 2 Jun 82 p 13

[Text]

TWO years ago when we launched our "Give The Yarra a Go!" campaign, the response from the people of Melbourne was tremendous. It was clear that, for all the jokes we make about it, the Yarra is something that people care about. Many others besides ourselves saw that the Yarra could be made into a beautiful parkway through the city and suburbs. The river that flows upside down could become a great landscape asset.

Now it appears that one authority had other ideas. The proposal by the SEC to build a huge 220-kilovolt transmission line along Merri Creek and the Yarra is the worst threat to the riverside for years. The transmission line would run for nine kilometres along the creek, the river and the Yarra Park at Richmond on towers 40 metres high, interspersed with poles 30 metres high. It would visually dominate the lower third of the proposed Merri Creek parkway, cut through the heart of Melbourne's only remaining bushland in Studley Park, continue down the river through Hawthorn to Burnley, then along the river through Toorak to the Richmond terminal station.

It is hard to imagine a more inappropriate route. No doubt it appeals to the SEC because it runs almost entirely through public land, so the commission would be able to acquire its easement free of cost. A much smaller 66-kilovolt line already runs along much of the route. The SEC has also made one concession in proposing to use the less obtrusive 30-metre poles rather than the massive towers for part of

the way.

It is nonetheless a quite unacceptable proposal. Transmission lines of this size are not compatible with the use of the river and the creek valley for recreation. They would be far less obtrusive running through the industrial areas of Abbotsford and Richmond than through a place of natural beauty where people go to relax. Of course, this would be more expensive; but the river easement costs nothing only if one places no value on the environment it would spoil. The cost to the SEC is one thing. The cost to the community is something else.

Obviously the Cain Government must call for a full environmental impact statement on the proposal. But it should go one step farther. In the past the SEC has often presented "options" to its preferred scheme, only to make it clear later that it did not consider them options at all. This time the Minister for Minerals and Energy, Mr White, must ensure that the SEC makes a genuine assessment of all the choices open to it — and that these are subject to expert independent scrutiny. Elsewhere, the SEC has run 220-kilovolt lines underground, and at Rowville it even proposes to run a 500-kilovolt line at ground level: why should it not do that here? Is the new line absolutely necessary in any case? And what would be the cost of running it underground, at ground level, underwater, through the factory belt or along railway lines? These should be the real options for the SEC. It should leave the Yarra for the people to enjoy.

CSO: 5000/7552

AUSTRALIA

BRIEFS

CONSERVATION CAMPAIGN--Canberra--The Commonwealth Government yesterday launched a \$500,000 TV and radio advertising campaign to encourage Australians to protect and conserve their natural environment. The Environment Minister, Mr McVeigh, said the theme of the campaign would be "Mother Nature's Playground." [Text] [Melbourne THE AGE in English 2 Jun 82 p 3]

SALT-LAND RECLAMATION--Various State Government departments plan to spend more than \$1 million on salt-land reclamation work in WA agricultural areas next financial year. Estimates have been made for trials and research but the final total has yet to be approved. This financial year expenditure will be about \$700,000--one-third more than last year and the highest yet. State Government interest in salt-land reclamation has increased markedly in the past two years because salinity problems have caused serious concern. Reclamation methods have become a controversial part of WA agriculture. Many farmers are installing interceptor banks contrary to official recommendations. Last year it was estimated that an area equivalent to 200 farms was now out of production because of salt and that the total was increasing at 12 farms a year. The Minister for Primary Industry, Mr Old, said yesterday that the Agriculture Department had started two trials in the northeastern wheatbelt. One was a large-scale deep-drainage trial on a 10-hectare site of bare salt land near Dalwallinu. The second was on two nearby farms and involved lowering the water table by pumping. Mr Old said that the trials would allow practical advice to be given to farmers on the costs and effectiveness of drainage schemes which were now being examined thoroughly because of the increasing value of farmlands. [Text] [Perth THE WEST AUSTRALIAN in English 2 Jun 82 p 3]

CSO: 5000/7553

CHANGED RIVER COURSES BRING EROSION DANGERS

Calcutta THE STATESMAN in English 3 Jul 82 p 3

[Text]

By a Staff Reporter

THE West Bengal Government is daily receiving distress telegrams from the people in Dhulian, Nimitita, Nayansukh and some areas up to Jalangi and Farakka downstream, warning it about rapid erosion by the Ganga. Some people had started evacuating areas threatened by the erosion, Mr Ram Narayan Goswami, Minister of State for Irrigation, said in Calcutta on Friday. The river has changed its course within one km, or even half a km at places, from the railway line or the highways.

Mr Goswami said that he would take up the issue at the meeting of the Ganga Flood Control Board in Delhi on July 6. The State had demanded Rs 198 crores to intensify protective moves to check the erosion. According to the Minister, the changed course of the Ganga has threatened Malda on the upper stretches of Farakka as well. He feared that if immediate steps were not taken, the feeder canal of the Ganga would meet Bhagirathi. This would defeat the purpose of building the Farakka barrage. In Jalpaiguri, the Teesta has changed its course and breached the embankment at Bakulia. Mr Goswami, who recently toured north Bengal, said that "sausages" were being piled to protect the embankment. He alleged that this was the result of a wrong decision made by the former Irrigation Minister, Mr A. B. A. Ghani Khan Chowdhury, who shifted a proposed embankment on the Teesta at the place, ignoring the suggestions of the engineers of the department. At Bakulia, the river had already swept away one of the five protective spurs.

Mr Goswami hoped that irrigation water would be released from the Teesta barrage project in Jalpaiguri during the rabi season next year. In the first phase, 12-km long canals would feed large areas in Cooch Behar and West Dinajpur. At present, work on four km

of canals had been completed. However, the State Government, he said, had requested the Centre for an immediate grant of Rs 10 crores to carry on work on the first phase. The entire project, which had a command area larger than the total command areas of three other such projects in the State—the Damodar Valley, the Mayurakshi and the Kansabati projects—was estimated to cost Rs 300 crores. In the first phase, the canal connecting the Teesta with the Mahananda has been completed. But the pace of work would have been faster if the Government could settle earlier some disputes over acquisition of land.

The Minister said that of the 35 small irrigation projects taken up by the Government, 15 had been completed. According to him, these would enable 50,000 hectares to get irrigation water during the present kharif season alone. During the last rabi and kharif seasons, 45,000 hectares of cropland got the facility.

CSO: 5000/7076

BRIEFS

MOUNTAIN RANGE ECOLOGY--Jodhpur, July 5. The Aravalli mountain ranges in Rajasthan, older than the Himalayas, are facing a serious ecological crisis. If the "indiscriminate felling of trees, killing of wildlife and mutilation of its topography is not stopped then the region will become another Thar desert in two decades from now," a survey warns. The preliminary survey was conducted by a group of scientists of the Environmental Cell of the Gandhi Peace Foundation here. The survey was conducted in Nana, Peepla, Bheemana and Kundal villages in Pali district situated in the foothills of the Aravalli ranges. Villages close to two major dams--Jawai and Sahi--in the same vicinity was also surveyed. A rich wildlife habitat which used to thrive a few years ago was bereft of any animals in about an area of 600 sq. km. "Even the national bird peacock was not sighted," the survey says. [Text] [Madras THE HINDU in English 6 Jul 82 p 16]

EROSION NEAR FARRAKA--The West Bengal Government is worried about the large-scale erosion on the banks of the Bhagirathi near Farakka at the Nayansukh point, which has reduced the land gap between the Ganga and the Bhagirathi to 1 1/2 km. The river's shifting course was resulting in the loss of Indian territory and a consequent territorial gain for Bangladesh, Mr Ram Narayan Goswami, Minister of State for Irrigation and Waterways said in Calcutta on Tuesday. Mr Goswami will attend a meeting of the Ganga Flood Control Board in New Delhi on July 6 at which he will raise the issue. He will represent Mr Jyoti Basu, who is a member of the board. The State Government had asked the board for a grant of Rs 198 crores to check erosion in the 1980-1981 financial year. This will also be taken up at the meeting. Mr Goswami said the land gap between the Ganga and the Bhagirathi was nearly 5 km till three years ago. If the Ganga Flood Control Board did not take immediate steps to check erosion, the very purpose of the Farakka barrage would be lost, he feared. The National Highway, the State highway and the Railway tracks passing between the two rivers are threatened, according to Mr Goswami. The erosion also poses a danger to the towns on the banks which include Dhulian and Jalangi. [Text] [Calcutta THE STATESMAN in English 30 Jun 82 p 16]

CSO: 5000/7075

ADVANCES REPORTED IN CONTROL OF URBAN POLLUTION

Chengdu SICHUAN RIBAO in Chinese 8 Jun 82 p 2 ✓

[Article by Deng Anxu [6772 1344 2049]: "Heartening Achievements Scored in Province's Environmental Protection Work Through Comprehensive Planning and Equitable Distribution, All Around Use Changing Liabilities Into Assets"]

[Text] Sichuan Province has actively worked to publicize and manage environmental pollution. It has intensified overall control of pollution and launched all around utilization that has both improved the environment and advanced a buildup of production for an increase in economic benefits.

Party and government at all levels in the province attach importance to environmental protection work and have conducted widespread publicity about the important significance of environmental protection. As a result, the broad masses of cadres and people realize that Sichuan Province's natural resources and ecological balance have sustained considerable damage as a result of environmental pollution, and that unless prevention and control are enhanced, serious consequences may ensue. Consequently, this problem must be given an important place on agendas and a conscientious program carried out for "comprehensive planning, equitable distribution, all around use, turning liabilities into assets, relying on the masses, everyone acting to protect the environment and create prosperity for the people" so that the building of production and protection of the environment will be linked in practice for their mutual advancement and coordinated development. Sichuan Province has given emphasis to bringing under control pollution by established enterprises. It has proceeded from individual controls to comprehensive controls, has developed from simply handling cases to a linking of handling with prevention and control, has developed from partial control to systems control, and has gone on to link enterprise readjustment and technological improvements, vigorously carrying out this work, which has strikingly improved economic and environmental benefits.

Incomplete statistics show that during the 7 year period 1975-1981, entrepreneurial units throughout the province invested a total of 330 million yuan in control of pollution in somewhat more than 4,000 projects, most having gone into production following work completion. Concurrent with improvement in handling of the "three wastes," [waste gas, waste water, and industrial residue] has been an increase in production and profits. Last year alone,

new products resulting from the comprehensive use throughout the province of the "three wastes" had a value of more than 47 million yuan, and profits earned amounted to more than 10 million yuan. Moreover, a group of enterprises with enlightened production, wooded plant areas, and control over the three wastes came into being. Units concerned within the province have gradually intensified environmental management by preparing both long range and annual plans for environmental protection. They have drafted and publicized management methods for environmental protection in capital construction. In capital construction they have strictly ensured that the designing, building, and operation of pollution prevention and control devices be done simultaneous with the designing, building and operation of the main project. These "three concurrents" have been instituted in 82.7 percent of all the large and medium size projects that have been built and gone into production during the past 3 years. Units that exceed standards for discharge of pollutants are fined a pollution discharge fee. From the provincial level down to the county (and municipality) level, environmental protection management organizations empowered to supervise and inspect have been established.

Sichuan Province has also seen development of environmental monitoring. The province has set up 22 environmental monitoring stations with a corps of more than 600 monitoring personnel. They have, in varying degrees, begun routine monitoring of air and water quality. In Chengdu, Chongqing, Zigong, and Dukou, fairly comprehensive monitoring is done of the water, air, plants and animals, soil, crops, noise, acid rain, and sources of pollution. They have already preliminarily figured out the main source of pollution in Chengdu and Chongqing and have provided technical data to solve this problem. In view of the environmental pollution and damage caused by floods in the province last year, units concerned and some prefectures have organized forces to investigate and study, and to conduct all around surveys to determine inherent relationships between the floods and the environment, to master their laws, to take action, and to provide against possible troubles. The experiences of the Anshan Steel Company in making comprehensive use of resource, energy, and control of the three wastes have also been promoted in some units in the province and some results have been obtained.

9432
CSO: 5000/4055

CHEMICAL INDUSTRY EFFORTS TO CONTROL WATER POLLUTION SKETCHED

Chengdu SICHUAN RIBAO in Chinese 8 Jun 82 p 2

[Article: "All-Around Use, Elimination of Pollution, and Turning Wastes into Treasures. Chongqing Chemical Industry Enterprise Places Environmental Pollution on Its Agenda"]

[Text] The Chongqing Municipal Chemical Industry Bureau has done a conscientious job of environmental protection by beginning all-around use of waste water to turn wastes into treasures. This has eliminated pollution, promoted the development of production, and increased the enterprises' earnings. During the past several years, the enterprises subordinate to this bureau have completed nearly 100 projects for all-around use of waste water, annually recovering from chemical industry waste water and waste liquids more than 30 items including acephatemet [$\text{CH}_3\text{OCH}_2\text{SPONH}_2$] and chromium sulfate amounting to more than 11,000 tons and valued at more than 5 million yuan.

Chongqing's chemical industry enterprises produce numerous kinds and varieties of products in small lots. They annually use about 45 million tons of water, discharging 30 million tons of waste water into the Chang Jiang or the Jialing Jiang, which definitely pollutes the area's water system and part of the environment. In order to change this state of affairs, the Chongqing Municipal Chemical Industry Bureau made all plants conduct a survey of sources of waste water pollutants, and formulated, on this basis, all-around utilization plans, using all-around utilization to promote environmental protection. It required a saving in funds, recovery of materials and speed from all-around use. The Chongqing Pesticide Plant categorized main sources of polluted waste water within the plant, printed up a list, and sent it to individual workshops and to factory teams and groups to arouse everyone to carry out all-around use. Each workshop set up treatment and recovery teams, which recovered methanol, methylamine, sulfolipids, phospholipids, and ammonium chloride among a total of more than 10 products for an increase in earnings and a reduction of pollution.

In the process of launching all around use, this bureau got all plants to proceed from realities to find means requiring little investment of capital that brought quick results. The Chongqing Organic Chemical Plant used solvent extraction methods to recover sodium phenoxide from waste water containing

phenol that had been discharged in the making of phenol by the sulfonating method. It annually recovered 150 tons, which was recycled into the phenol production system. The Chongqing Chemical Compound Plant used waste water containing phenol to produce SH resin, thereby turning a liability into an asset. At the same time they upgraded techniques, improved formulas, and changed the composition of raw and processed materials for a major effort in all-around use. During the past several years the Chongqing chemical industry system has upgraded techniques in more than 50 ways for very good results. Many plants changed the composition of raw materials and were able, without spending funds on investment or changing equipment, to convert directly chemical industry waste water that had formerly not been used into resources for use. In the process of manufacturing Rogor, the Chongqing Pesticide Plant successfully developed use of ammonia water to replace sodium bicarbonate, thereby changing the composition of its waste water. In addition to being able to recover sulfolipids and phospholipids for its own use, it was able to use the waste water to produce 2,000 tons of ammonium chloride water annually, selling it at a low price to support agriculture.

In the process of controlling waste water, this bureau actively strengthened environmental control. The Chongqing municipal chemical industry system has set up a more than 500-man specialized environmental protection corps; medium size and larger enterprises have established specialized organizations for environmental protection; and small plants also have persons designated responsible for environmental protection. In plants where conditions permit, environmental monitoring offices have been established. They have also made environmental protection a part of enterprise work competitions and one of the requirements in deciding on workpoints and calculating compensation. This has aroused the enthusiasm of the broad masses of staff and workers to do a good job of environmental protection.

9432

CSO: 5000/4055

SEMICONDUCTOR PLANT SOLVES ITS POLLUTION PROBLEMS

Chengdu SICHUAN RIBAO in Chinese 8 Jun 82 p 2

[Article by Ou Laiteng [2962 0171 7506] and Deng Xiaoi [6772 1420 5337]: "Results Seen From Unflagging Control of the 'Three Wastes.' Ministry of Metallurgy Designates Emei Semiconductor Materials Plant an Advanced Unit in Environmental Protection"]

[Text] As a result of 14 years of unflagging efforts, the Emei Semiconductor Materials Plant has substantially controlled pollution of the environment by the "three wastes" [waste gas, waste water, and industrial residues]. Today all water from this plant is processed, and it meets national standards for discharge. Sludge and coal cinders are used to make bricks and 70 percent of waste gases are properly treated. The plant area that has been beautified with greenery amounts to 80 percent of the available area, and the plant was recently designated an advanced unit in environmental protection by the Ministry of Metallurgy.

This plant produces mostly polycrystalline silicon, monocrystalline silicon, more than 20 kinds of metals of high purity, and more than 10 kinds of chemical compounds. It also does chemical industry and metallurgical production. The waste water, sludge, and waste gases produced in the process of production and research greatly pollute the surrounding environment. Beginning in 1974, this plant made solution to pollution by the "three wastes" a major topic, and in 1977 it completed a waste water conduit rationalization project so that all the plant's waste water flowed into a waste water pond. It also successfully developed lime milk neutralizing treatment, following which water quality meets standards for water in nature. Early this year, they grew 5,000 fingerlings in treated waste water, and they grew very well. Development of bricks made from sludge and furnace slag also succeeded in 1979. They are able to produce 500,000 sludge and slag bricks annually, using up their entire amount of sludge and slag. In the treatment of waste gases, they themselves designed and installed 10 tail gas scrubbers to reduce the toxicity of 70 percent of waste gases to below national standards for discharge of pollutants. In addition, they have planted flowers and trees. During the past 3 years they have planted 200,000 trees and almost 50 varieties of flowers, beautifying with greenery 80 percent of the plant area amenable to such beautification. Recently this plant passed inspection by units concerned, and is permitted to discharge pollutants without payment of fees.

BRIEFS

COASTAL WATERS LOSING MARINE LIFE--Aquaculture experts of the Southeast Asia Fisheries Development center reported recently that some coastal waters of the country are devoid of marine life. To solve this problem, they suggested the imposition and enforcement of mandatory restrictions on municipal and commercial fishing. However, there must be an alternative means of livelihood for municipal fishermen like marine culture and sea farming, experts said. The experts also found out that the destruction of the coastal waters' ecological system was due to the irrational utilization of mangrove forests, deforestation of watersheds, mining and disposal of mine tailings, reclamation projects, industrial and pollution, and other human activities that affect marine life in the coastal areas. In previous years, some 160,000 hectares of mangrove forests have reportedly been destroyed. Bureau of forest development experts attributed this to the conversion of mangrove areas into fishponds, industrial and commercial sites, dumping of mine tailings, and others.--(FTF) [Text] [Manila BULLETIN TODAY in English 13 Jul 82 p 27]

CSO: 5000/5779

POLLUTION THREATENS OCEAN, EXPERT SAYS

Lima EL COMERCIO in Spanish 1 Jul 82 p A-18

[Text] Ica, 30 Jun--Environmental pollution is reaching unsuspected levels in the country because the required precautions are not being taken, causing appreciable harm to the Peruvian population, according to Engineer Hugo Delgado Benavente, dean of Ica National University.

He said that in December 1975 and March 1976 the "red tide" phenomenon was present in Callao and that it reappeared in December 1978 and February 1979 causing a high fish kill.

He said that the ocean is being threatened by a series of waste products which man dumps into it consciously or unconsciously. These are industrial wastes, chemicals and bacteria-laden sewage from large and small cities.

He said that the ocean is being used as a kind of immense reservoir for thousands of tons of wastes which of necessity are going to change the natural environment.

The pollution of the ocean can take place in various ways, with household wastes being the most biodegradable and a source of nutrients for microorganisms.

He said that household wastes discharged into the ocean have five characteristics: A high concentration of bacteria, an elevated biochemical requirement for oxygen, sedimentary organic material, a high nutrient content and floating material.

He also said that microorganisms associated with household waste water are a threat to human health because of the direct transmission of germs.

Hepatitis

He revealed that the transmission of diseases through foodstuffs, such as crustaceans, is well documented; e.g., infectious hepatitis, while cases of typhoid fever and a number of cases of parasitosis contracted through direct contact have been reported.

Any addition of organic material to fresh seawater results in an immediate increase in microorganisms. The viruses are more resistant than coliform bacteria.

Tests show that when 50 percent fresh water is mixed with 50 percent culture medium and then with E. Coli, Shigell, psedomona, vibrion and salmonella germs, all of them grow quickly in a few hours.

Pollutants

He said that there are four chemical pollutants: Urban organic pollutants (urban wastes), inorganic and heavy metal pollutants, pesticides, organo-chlorines [organo-clorados] and petroleum and its byproducts.

Among the most dangerous heavy metals, on the basis of their toxicity, are: Mercury, copper, lead, zinc and cadmium. Mercury builds up in fish, birds and domestic animals. When oysters have a greenish color they contain zinc and copper. Arsenic is associated with copper, lead and zinc wastes.

8143

CSO: 5000/2139

EFFLUENT DISCHARGE INTO NILE RIVER AT ASWAN

Cairo AL-AHRAM in Arabic 6 Jun 82 p 11

[Article by Muwaffaq Abu-Nabil: "Who Is to Blame for the Nile Conditions at Aswan? Effluent Discharged Into the River--The Tourist City Lacks Sanitary Sewerage"]

[Text] Despite the Nile River being Egypt's life source, harm has been done to it in an inconceivable manner. Effluent is being deposited into the river before the very eyes of the people of Aswan, a result of the unsanitary sewerage system whose construction began 12 years ago and has not yet been completed. The government has fulfilled its obligations and spent 12 million pounds on the project, yet it has remained, to the expression of some, semi-complete. Moreover, there is equipment necessary for the project worth more than 1 million pounds which has been locked up inside crates and abandoned for 8 years.

It all began at an emergency meeting called for by Lt Ahmad Shaqqi al-Mutaqni, mayor of Aswan, and attended by engineer 'Abd al-Mun'm al-'Ishmawi, chairman of the sewerage system authority, as well as by officials of the directorate of housing and local units, during which he was the recipient of a report from the committee on housing at the people's council which is chaired by engineer Muhib Esteno.

The report stated the committee took a field trip to the district of Aswan and uncovered the fact that, as of to-date, the sewerage system has not been completed even though its construction work began in 1970. Officials were faced with nothing other than the waters of the Nile to dump effluent; thus contradicting the simplest rules of sanitation which the government has been advocating to safeguard the health and lives of the citizens.

At the outset of the debate, the mayor stated that after having reviewed the file, he became aware that about 50 percent of the construction stages of the sewerage system has not been completed. Three removal stations are completed, but remain inoperative. Imported equipment worth 1 million pounds was purchased for the al-Jazey depository, but which has been locked up inside crates for 8 years, making it susceptible to ruination.

A large number of the sewerage pipes were made of a combination of iron, steel and clay and could rupture at any moment, similar to what happened to the pipes at al-Matar street which burst in 1980, but a disaster was averted by having the pipes repaired. The mayor stated that he plans to develop a definite time schedule by which all parties involved would be committed toward completing the sewerage project.

At the end of the debate which centered around the technical aspects of the project, it was determined that the two removal stations numbered 2 and 3 at al-Hasayah and Nasiriya be opened for operation within two weeks only in order to alleviate pressure off from the main station; to complete the installation of the pipe at Birkit al-Damas station in a one-month period; to prevent effluent discharge into the river; to remove the sewage from the south Aswan station which is contiguous to the depository after having completed the construction of the temporary dam in order to contain effluent; and to follow-up on the reporting efforts made by investment companies on the soil of the new depository during the upcoming months so that its construction and installation can begin prior to year-end.

The city of Aswan is considered Egypt's gate to tourism. All countries around the world give significance to their tourist cities. How could we let the sanitary sewerage project in Aswan falter all these years which constrained officials to allow dumping the effluent into the glorious Nile River which our forefathers used to sanctify.

9770

CSO: 5000/5016

BRIEFS

WATER INSTITUTE--Important news has passed by very quietly in the past year. It states that the Institute for Water Affairs in Tripoli has graduated its first class, totalling 56 graduates. Four of them were appointed to work as teachers at the institute; the others were scattered around the Jamahiriyah to work at water stations and desalinization plants. What is the story of this institute, which is considered the first of its kind on the pan-Arab level and which is considered the nucleus from which specialized water institutes will grow? In March 1978 the Popular Council issued a resolution to build an institute for water affairs. It accepts students from preparatory school graduates and grants its graduates the right to enter specialized university schools. After the resolution was issued, the institute began operation to graduate specialists in water fields (underground and surface, desalinization and treatment). These specialties were classified under three divisions which the institute brings together: ground water and surface water, dams, drilling and equipment maintenance. In accordance with the institute law, the students who are accepted within the framework of the established conditions obtain monthly stipends. The institute is bent on an acceptance policy such that it brings together students from all communities in order to provide the graduates needed to cover the Republic as a whole. The students study the technical and applied sciences which qualify them for specialization in fields of climate, soil mechanics, types of dams and methods of building and maintaining them, ground water geology, hydrogeological maps, types of water, water quality, and drilling technology and equipment. Aside from this specialized concentration, the students study intellectual subjects which broaden their mental capacities and their general knowledge, such as statistics, geography, Arabic language, etc. The institute relies on a policy of specialization on the basis of the desires which the students display. However, what is new is that the institute is currently occupied with taking over responsibility for field operations, to have them accomplished completely by the students under the supervision of the faculty. [Text] [London AL-JAMAHIRIYAH FI USBU' in Arabic 27 May 82 p 7] 9605

SEEDLINGS PLANTED--The Al-'Asih Nalut pasture project for raising camels made great accomplishments in the field of growing and improving the pastures, where an area of 7,300 hectares was seeded with pasture vegetation and areas of shifting sand, estimated at 400 hectares, were stabilized. The following seedlings were planted: 800,000 (mizaf), 200,000 (hasia), 10,000 carob, 10,000 (rata), and 600,000 smooth fig (lukhah). Crops were also seeded over an area of 1,500 hectares. This is in addition to the fact that true Acacia seedlings were planted; 120,000 along the roads within the area and 10,000 in the Nalut(2) area. [Text] [London AL-JAMAHIRIYAH FI USBU' in Arabic 13 May 82 p 8] 9605

CSO: 5000/5017

EROSION IN NEW KRUTOWN, OTHER AREAS INTENSIFYING

Monrovia DAILY OBSERVER in English 8 Jul 82 p 12

[Text]

Several residents of the Fanti community in New Krutown were left homeless on Tuesday when two houses in the area were swept away by sea.

Reports say erosion is encroaching upon the area with such intensity that other residents in the area have begun removing their belongings to the houses of friends and relatives in the neighbourhood, who are farther from the sea.

Mrs. Martha Sonpon and Mr. Jacob Blamoh whose houses were broken down by the erosion, lost some of their belongings as some people who had gone to help them remove them, rather made away with them.

Messrs. Othello Williams and Gabriel Nimene were almost breathless when they rushed to the offices of the **Daily Observer** to report the damage the erosion was causing in the area.

When the **Daily Observer** sped to the area, it saw panic-stricken people desperately trying to vacate their houses. The residents said if nothing is done fast to arrest the situation, many more people will lose their houses — and their belongings if thieves do not spare them.

The **Observer** also discovered that the road leading to the D. Tweh High School in New

Krutown has been washed away by the sea.

Furthermore, the school building and the Point Four Congregation House of Worship now known as Church of Jesus Christ of Latter Day Saints are being threatened by the erosion.

The people in the eroding area are appealing to the government to assist them in their relocation effort.

Erosion has been posing a threat to several areas of Liberia along the sea coast. On June 16 the **Daily Observer** carried a report by a geology professor at the University of Liberia, who sounded a warning concerning the "rapid and dangerous" erosional process affecting beaches around Monrovia.

He is Dr. Ntungwa Maasha, chairman of the Department of Geology, University of Liberia, who called for urgent government action to arrest the situation.

Dr. Maasha based his call on intensive geological research

work he did in the Monrovia area between October 1980 and January 1981, covering the coastline from Wamba Town (east of ELWA) to Yatono in Virginia (north of the OAU Village).

Geologist Maasha said the most serious erosional areas are from the mouth of the St. Paul Rivr to Yatono in the vicinity of the OAU Village, and about 1.5 kilometers beyond the northern breakwater of the Free Port of Monrovia in New Krutown.

He noted that along the beach toward the D. Tweh High School is littered with vehicle wrecks placed there by the people to help curb the erosion which has already played havoc with West Point.

Dr. Maasha said erosion in that area takes place at the rate of up to six feet per year. He recommended that the protection of structures against erosion should be taken seriously in New Krutown and the OAU Village, where, he said, erosion was gaining momentum each day.

SOUTH AFRICA

BRIEFS

OIL-LEAKING TANKER--Durban--Captain Paule Amante, master of the Portuguese super tanker Marofa, which is heading for Durban after reporting an oil leak on Wednesday about 57 km off Port St John, says his vessel is damaged in two places on her port side, but that oil is now leaking from only one of the cracks. In a ship to shore radio interview with the SABC yesterday morning, he said very little oil was escaping from the ship at present. The exact position of one damaged section had been located in the number four port wing tank. The other damaged section was somewhere between the number two and number three port wing tanks but at the moment no oil was leaking from this tank. Capt Amante said in view of the fresh southwesterly wind, oil was unlikely to drift inshore. He said later yesterday an aircraft with officials of the marine division would inspect the sea to determine whether or not the vessel could come within 70 km of Durban and drop anchor. Divers would then be able to go over the side to carry out emergency repairs. The ship is steaming at nine knots and was expected to arrive near Durban at about 7 pm last night.--Sapa [Text] [Johannesburg THE CITIZEN in English 16 Jul 82 p 9]

CSO: 5000/5781

MINISTER NOTES SPREAD OF SOIL EROSION TO TEN REGIONS

Dar es Salaam DAILY NEWS in English 13 Jul 82 p 1

[Article by Mkumbwa Ally]

[Excerpt]

TANZANIANS have been urged to step up re-afforestation and apply better land utilisation methods to check soil erosion threatening eleven Mainland regions including Dodoma.

The Minister for Natural Resources and Tourism, Ndugu Ali Mwinyi, told the National Assembly in Dar es Salaam yesterday that unless urgent collective measures were taken large portion of land would be eroded, resulting in food shortage.

Presenting his Ministry's 1982/83 estimates, Ndugu Mwinyi said apart from Dodoma where a land conservation project is underway, soil erosion had spread to Arusha, Singida, Shinyanga, Mwanza, Mara, Tabora, Iringa, Mbeya, Ruvuma and Mtwara regions.

He emphasised land use reforms, pointing out that if the trend continued unchecked its repercussions would be far reaching, affecting "this and the coming generations".

QUARTER OF NATION'S POPULATION FACE STARVATION BECAUSE OF DROUGHT

Harare THE HERALD in English 10 Jul 82 p 1

[Text] More than a quarter of Zimbabwe's population--two million people--face starvation because of the drought, the national vice-chairman of Christian Care, Mr Robbie Mupawose, said yesterday.

Speaking in Harare at the launching of a church appeal, Mr Mupawose, who is Secretary for Agriculture, said the Government had shown its concern and was raising resources to help with food, water and saving livestock.

"The task, however, is too big for the Government to undertake on its own. Christian Care is accepting the request of the churches to execute the drought relief programme.

"We hope to feed about 20 000 people from now until the next crop is ready in May or June 1983. We hope of course, that rains will be good next season.

"Locally we hope to raise about \$20 000. This we hope to use immediately while we await response to our overseas appeal. We require a total of \$5,5 million to accomplish this task."

Mr Mupawose said Christian Care would introduce a scheme to help farmers become self-reliant by the middle of next year and would discourage the people they wanted to help from becoming too dependent.

Solidarity

Launching the appeal, the chairman of the Heads of Denominations, Anglican Bishop of Harare the Rt Rev Peter Hatendi, said half the two million people affected were children who had never before seen a drought as serious as this.

"In launching this programme the church wishes to show its solidarity with the Government and the people in fulfilling the command of Christ to "Love thy neighbour."

"Whereas some of us are used to three meals a day and running water in our homes and offices, most of the drought-stricken people will probably adjust to one meal every three days and may emigrate from their homes in search of water."

The Minister of Information, Posts and Telecommunications Dr Nathan Shamuyarira and the Minister of Health, Dr Oliver Munyaradzi, were at the opening.

Gifts should be given through people's churches or directly to Christian Care, PO Box 33, Harare.

The Binga district administrator, Mr John Singende, says food aid to his district has been inadequate.

The people of Binga could not get food even after reports that handouts had been supplied to the area, he said.--ZIS

CSO: 5000/5783

DROUGHT PUTS THOUSANDS IN FARM JOBS

Harare THE SUNDAY MAIL in English 11 Jul 82 p 3

[Text]

THOUSANDS of poor people are fleeing their drought-ravaged lands in western Beitbridge communal areas to work on commercial farms.

With the drought worsening and money getting short the people, especially women and old men, are abandoning their homes to take advantage of seasonal harvests of cotton and fruit and earn meagre incomes to supplement their cattle sales.

The cotton picking season is at its peak on two farms in the district and oranges will soon be ripe on four estates.

A 200-man workforce at Benifer Estate has been swelled by more than 4 000 casual workers.

At Germ farm 56 permanent workers have been joined by 300 cotton pickers.

There are more than 2 000 casual workers at the largest estate, Nottingham farm, and their number is expected to rise this month when orange picking starts.

The 250 pupils at Germ farm, which has the big-

gest school in the area, pick cotton to help their parents and earn pocket money. Deputy headmaster Mr J. P. Moyo said teachers sometimes accompanied their pupils, using their earnings to buy uniforms for the school's football and netball teams.

Casual workers are paid about 4c a kg of picked cotton. Most work from sunrise to sunset, picking an average of 40 kg a day, which fetches them \$1.60. But others pick as much as 100 kg, earning \$4 a day.

It is the only source of income for the drought-stricken people whose livelihood of cattle rearing is now seriously threatened. They use their earnings to buy mealie-meal and vegetables which are sold more cheaply on the farms.

These vegetables, and the abundant fruit, are helping to fight malnutrition.

The mass exodus has created accommodation problems on two of the estates, where some of the refugees have built plastic shanties.

ARMY CALLED TO EASE DROUGHT CRISIS

Johannesburg THE CITIZEN in English 19 Jul 82 p 12

[Text]

HARARE. — The army has been called in to help ease the drought crisis now affecting nearly three-million people.

Outlining contingency plans at the weekend to combat the drought, the Minister of Water Resources and Development, Mr Cephas Msipa, warned that the government might be faced with feeding two-million people. Plans were also necessary to transport water to 120 000 people who could die if they did not get help soon.

He said it was impossible to tackle the water shortage in all parts of the country simultaneously and his ministry would have to give priority to the worst-affected areas.

Mr Msipa urged government representatives to advise people in the communal lands to report serious water supply problems directly to their district councils or provincial councils.

There were more than

600 areas throughout the country without water.

A preliminary study by his ministry had shown that the estimated cost of the equipment and vehicles for transporting water would amount to

Zimdollars 1,3-million (about R1,6-million).

An emergency government feeding scheme for two-million people at the peak of the drought would involve the movement of 1 200 tons of food a day. — Sapa.

DROUGHT RELIEF PROVIDED TO BEITBRIDGE, PLUMTREE DISTRICTS

Harare THE HERALD in English 15 Jul 82 p 4

[Text]

ABOUT 12 000 peasants in Beitbridge and Plumtree districts have now been given food, the chairman of the provincial drought relief committee, Cde Jacob Mudenda, was told on Tuesday.

Cde Mudenda and his deputy, Cde Jerry Nyathi, met the district drought relief committees in Beitbridge, Plumtree and Gwanda at the start of their flying tour of all Matabeleland districts.

According to the Beitbridge district administrator, Cde Herod Sibanda, 9 000 out of 21 000 needy people in the district had received food aid by the end of May.

In Plumtree about 3 000 out of 90 000 needy people had received aid so far, the district administrator, Cde Herbert Matanga, said.

In Gwanda the number of people fed had not been fully calculated as the figures were still coming in, the district administrator there, Cde Godwin Gumbo, said.

Shortage of transport, inadequate food supplies and the inability or unwillingness of some councillors to strictly adhere to the criteria for giving out food were cited as some of the problems in the programme.

Cde Sibanda said the District Development Fund trucks being used to transport food were also being used to carry fuel to water pumping engines.

The problem of transport would become acute with the coming census, as the same trucks would have to be made available for the exercise.

He feared the distribution of food during the census period might create another difficulty. "We will have people receiving food aid at one place when they are supposed to be counted at another place," Cde Sibanda said.

People should get a double allocation before the census, so that they could stay at home to be counted.

In Plumtree, Cde Matanga said some councillors were not following the criteria for giving out food.

With council elections due soon, some councillors were including people who did not qualify for relief under the set conditions.

"Councillors have deliberately refrained from implementing the criteria for drought aid. There is a small margin between the actual population of the district and the number of

people listed as needing food aid," Cde Matanga said.

Some of the people listed were actually employed in places like South Africa and elsewhere. But attempts to make councillors adhere strictly to the criteria created a difficulty in that they tended to turn it into a political issue.

"In the end there was a danger of us being accused of not feeding needy people," Cde Matanga said.

As a result he had given food in bulk to each ward and left it to the local councillors and their relief committees to supply the needy. "We give each ward what we think is sufficient for them, regardless of how much they ask for," he said.

Cde Gumbo said many councillors in Gwanda were submitting to pressure to flout the criteria. He told Cde Mudenda and Cde Nyathi that he would be calling a meeting of councillors to reiterate the need to follow procedure.

Cde Sibanda, Cde Matanga and Cde Gumbo all said there had not been enough food for distribution. It was hoped that the next shipment, due to arrive this week, would improve matters.

PROJECT TO ENLARGE SEBAKWE DAM REPORTED

Harare THE HERALD in English 15 Jul 82 p 4

[Text]

A CONTRACT worth \$13,5 million to raise Sebakwe dam wall will increase the lake's capacity by 72 percent, the Minister of Water Resources and Development, Cde Cephas Msipa has said.

The construction will be a joint venture between Andrews and Kidd (Pvt) Ltd of Zimbabwe and Wade Adams Construction of London. The Government will finance the project.

Cde Msipa said in Harare on Tuesday that the dam wall was being raised to increase the supply of water for industrial and municipal use in Kwekwe and Redcliff which would have been inadequate by 1984.

The works would be completed in time to store the rains at the end of 1984, the minister said.

"The volume of water stored in the dam after the construction would increase by 72 percent from 155 to 267 million cubic metres." At the present rate of growth the enlarged dam would satisfy water demand until 1995.

A ministry engineer, Mr Michael Robertson said: "The operation will be complicated. The main concrete wall will be raised by 6,1 m.

"Tensioned cables will be drilled through the upstream face of the dam to ensure structural stability. There will be 80 of these cables, about 150 mm in diameter and capable of taking a force of 600 tonnes."

The only other application of this technique in Zimbabwe was at Mazoe Dam, originally completed in 1920 and raised in 1960.

CSO: 5000/5783

BRIEFS

DROUGHT HIT CO-OP FARMS--Gwanda--Several co-operatives in Matabeleland South have been forced to stop production due to an acute shortage of irrigation, the co-operatives officer for Matabeleland South, Mr Isaiah Togwe said here yesterday. Mr Togwe said there were about 24 registered co-operatives with more than 3 000 members in the province, but most had stopped production because of the drought. In many cases water was available but pumps had been out of use since the war. Appeals for help to the Ministry of Water Resources and Development had been fruitless. Mr Togwe said a lack of spare parts had stalled the repair of the pumps. Some of the co-operatives still working had been forced to operate at quarter capacity due to the water shortage. The worst affected were those in Gwanda and Beithridge districts. Mr Togwe also said, however, that more people were joining co-operatives as they realised their potential. He was hopeful that two more co-operatives, one at Kafusi and another at Filabusi, would be registered soon as production had already started. At Kafusi School members were already raising chickens while more than an acre of land had been cleared in readiness for vegetable production at Filabusi.--Ziana [Text] [Harare THE HERALD in English 13 Jul 82 p 3]

CSO: 5000/5783

GREECE

ENTIRE KHALKIS AREA REPORTED POLLUTED

Athens TA NEA in Greek 2 Jul 82 p 9

/Text/ Khalkis--Pollution levels in the city of Khalkis and the surrounding areas have reached the danger point.

In connection with this problem, Mr Nikos Papiggis, president of the Environmental Protection Society, told TA NEA the following:

"Measurements that were made in northern and southern Evvoikos and in the atmosphere of the region by the Khalkis Environmental Protection Society, PAKOE /Panhellenic Center of Economic Research/ and the Oceanographic Institute reveal the following:

"- The sea is badly polluted by industrial waste being poured into the Evvoikos.

"- The atmospheric air presents 100 percent suspended solids above accepted levels because of the operation of the Cement and Larko Industries.

"We call for the implementation, even of the existing legislation (GOVERNMENT GAZETTE issue 1136/B/27 Dec 1979) that provides for the processing of industrial wastes and controls over cement industries to put an end to years of immunity and provocations."

5671

CSO: 5000/5336

GREECE

BAR ASSOCIATION ISSUES STATEMENT ON POLLUTION

Athens TA NEA in Greek 1 Jul 82 p 4

/Text/ The Bar Association Congress has decided to mobilize all bar associations of the country to confront, together with other mass groups, the pollution danger that threatens public health and both the natural and cultural environment.

Within the context of mobilization, the establishment of a Panhellenic Committee of Lawyers was decided upon to promote solutions to the environmental protection issue. Participating on this committee will be the bar associations of Athens, Salonica, Piraeus, Patras, Volos, Khalkis, Kavala and Kozani.

The congress stressed the lack of legislative measures capable of corresponding to the environmental protection needs and to the unjustified non-implementation of corresponding constitutional regulations up to now.

It also calls for the creation of a single environmental protection agency with the participation of the local administrations and mass groups of workers, as well as the drafting of a basic law on environment.

5671

CSO: 5000/5336

GREECE

ATTIKI INDUSTRIES TO CONVERT TO GAS

Athens TA NEA in Greek 1 Jul 82 p 12

/Text/ Under study is the possibility of a gradual replacement of fuel oil and diesel oil, currently being used by industries of the Attiki region, with gas to be supplied by the central gas line and net of the DEFA /Athens Public Gas Corporation/.

This was announced yesterday by Minister of Industry An. Peponis following a meeting with Mr Khr. Fyrogenis, president of SVAP /Attiki and Piraeus Union of Industries/.

As already announced, the SVAP president has sent a relative communique to all members of the union.

In the meantime, it has been made known that officials of the Ministry of Industry and DEFA have localized the area in the Athens basin where the greatest concentrations of industrial pollution are found and which will be primarily tied in with the gas supply line.

It is also expected that competitive bids will be announced shortly for the first stage of the line that will bring in gas to the Thriasian plain.

Yesterday at noon, an agreement was signed at the Greek Aspropyrgos Refinery with the Italian firm "Imbiandi Gas International," an affiliate of the British firm "Babcock," for the construction of the two first city gas producing units.

The minister of industry said, "With this agreement and the agreement for the construction of the line which is being promoted we are definitely entering the stage of implementation of the prime minister's decisions on city gas and the definitive suspension of operations of industries on Piraeus Street."

5671

CSO: 5000/5336

GREECE

BRIEFS

ATTIKI REFORESTATION STATISTICS--A total of 50,000 acres of burned-out forests have been replanted with 3 million small trees of various types since 1967. It is envisioned that until 1987, an additional 40,000 acres will be reforested with the planting of 2,5 million trees. The reforestation department of the Ministry of Agriculture plants a total of 500,000 trees every year, while another 500,000 are distributed to various organizations, services and private citizens. [Excerpt] [Athens TA NEA in Greek 12 Jul 82 p 4]

CSO: 5000/5341

ACIDIFICATION OF WATERS CONCERNS RESEARCHER, OFFICIAL

Countermeasures To Reverse Pollution Demanded

Oslo AFTENPOSTEN in Norwegian 14 Jul 82 p 32

[Article by Eivind Fossheim: "Liming of Rivers and Lakes--Time To Start Rescue Action"]

[Text] Audna Stream in West Agder. It is worth while to give the glitter of life back to the rivers and lakes which are devoid of life. It is possible to prevent new streams from being hit by sulfur rain from industrial smokestacks on the Continent. Norwegian scientists now know so much from their own tests with liming and of the experiences in Sweden that land owners, fishing associations and other managers of streams can carry out actions to fight the greatest ecological catastrophe that has ever hit our land.

The liming project, that 4-year research program led by the Directorate for Game and Fresh Water Fish and financed by the Department of Environmental Affairs, has after 2 years of activity discovered a liming method which can be immediately used in the countryside, said fish researcher Odd Skogheim to AFTENPOSTEN. "We now know so much about the different liming methods and their effects that we can calculate where most streams can best be treated and what it will cost to carry out the simple actions."

During an inspection of Audna Stream we studied the most important experiments in liming which were underway and what lessons had been learned. We saw wells with crushed shell sand, dry dosing with lime flour and also the interesting open lime slurry equipment at Vardalsana. It cost 200,000 kroner, and automatically releases the correct dose of a light, free-flowing pure lime into the water in the stream. This permits a careful dosing adjusted to the stream and calculated with the help of the installation to hold a degree of acidity or pH of at least 6 in the Upper Oydnavatn where the stream enters, at the same time as it obviously will have a favorable effect on the Audna Stream farther down. A pH of at least 6 is necessary

for living conditions for both the young trout and its most important food, it was learned during the investigation. Until recently that stream with its pH of 4.9 has been void of fish.

Most people know that liming is an expensive undertaking, and especially so when the stream is already void of fish and food substances. To hold a pH of 6 in the Upper Oydnavatn takes a quantity of 100 tons of slurry per year, and the price is 700 kroner per ton delivered in tankers at the location, according to the producer at Molde.

"Liming of lakes and streams is a popular technique today," said fish researcher Odd Skogheim. By knowing the amount of water and the rate of flow and the day's pH value we can easily calculate what it will cost to hold the water at a certain level with the help of a supply of lime flour (agricultural lime) or fine lime. Large problems can occur with running water or supply streams. In smaller streams we can lay out wells with shell sand or limestone. In streams with a water flow of over 0.5 cubic meters per second we must choose between the installation with the light easy-flowing lime or the lime silos for dry dosing of lime adjusted to the water flow in the river at all times."

Even though we know a lot about liming methods and dosing today, it remains however to study the full biological effect of liming, with a view to returning the entire ecosystem to functioning as nearly as possible to normal again.

"Where should one go to learn about liming, equipment, and get good advice? Contact the Directorate of Game and Fresh Water Fish in Trondheim, or the fisheries consultant in your county."

Hans Kalleberg can testify that the liming of acid streams gives good results. For over 12 years he has used lime wells and has gained lots of experience for the benefit of river owners and fishermen.

"Come to Prestoygard and Storoygard fishing districts in Evje and study our trout," he said. "Previously there was not a fish there. Today they are there, big, fat and fine! With neighborhood work and help from the Defense Department in bringing out the lime, it cost us only 3000 kroner per year to maintain the trout level up."

"Without the help from the Defense Department it would perhaps have been 10,000 kroner. Liming of streams must be greatly increased," said Kalleberg, "because if we just sit here doing nothing we are losing one irretrievable generation of trout and salmon after another. The state will soon have to come in with significant amounts of money to stop more of the fish stock from disappearing. It is a community task, not just a local one," he said.

Ministry Official Sees Worsening Situation

Oslo AFTENPOSTEN in Norwegian 14 Jul 82 p 32

[Article by Eivind Fossheim: "Undersecretary Bjarte Eikeset Calls For More Liming of Streams"]

[Text] Audenal in West Agder, 13 Jul. "It is necessary that the state participate more in efforts to prevent and lessen the damaging effects of acid rain in the streams," said Undersecretary Bjarte Eikeset of the Department of Environmental Affairs to AFTENPOSTEN. "In addition to the current research project we want to expand the activity with new liming efforts in streams which have great value for recreation and especially leisure-time fishing, and that will be taken up in connection with the state budget for 1983," said Eikeset.

"By beginning new test projects in streams which were previously full of fish which have been destroyed by acid rain, we are obtaining triple value," continued Eikeset. "In addition to further development of the liming installations and building up an instruction service, we are getting practical results in recreation possibilities by restoring and increasing fishing stocks to the levels of the good old days.

"Acidification of south Norway's streams is undoubtedly the greatest environmental catastrophe which has hit Norway," said Eikeset, who emphasized that it must not be expected that state resources alone can save the streams. There must be future contributions from local communities where the liming efforts can be financed with the help of fishing licenses and possibly small future state support. The responsibility of the state must primarily be to develop proper installations and create a knowledgeable instruction service, while local communities must produce the rest of the needed resources.

"Besides saving the remains of the fishing stock and restoring life where the fish are already wiped out, it is important to go in with efforts in the streams where the fish are still thriving, but where the symptoms of stronger acidity are threatening the life-support chain and the rest of the environment. Such 'advance liming' can be much cheaper and less time-consuming than setting up corrective measures when the streams are void of fish and food.

"We will not overcome acid rain by only liming the streams. In the long run that would be too expensive. We continue to see it as most important to fight the acid rain," said Eikeset. "There are now signs that on the

Continent they realize more and more what damage they are doing by releasing sulfur and nitrogen gases. The West Germans have noticed the damage to their own forests, and are more concerned about what can happen with their own environment in the future, and are working harder to clean up their own industrial emissions. We are now getting West Germany on our side in the fight against emissions in the atmosphere, and we hope that will lead to still more European countries opening their eyes to the pollution that they are causing, both to themselves and to others, by releasing gases uncritically into the atmosphere," said Eikeset.

9287

CSO: 5000/2140

SWEDEN

WATERS ACIDIFICATION TRACED PARTLY TO WASTE WATER FACILITIES

Stockholm DAGENS NYHETER in Swedish 4 Jul 82 p 7

[Article by Ingvar Andersson]

[Text] A large portion of the acidification of lakes and streams in Sweden is caused by emissions from municipal waste water facilities. They are responsible for almost one fourth of the sulfur emissions originating in this country.

This previously unknown information was presented in a report by ecologist and university professor Bjorn Lindahl in Lund.

"This discovery may be of great significance for reducing acidification in Sweden," Bjorn Lindahl said. These emissions are easy to localize and eliminate.

Undiscovered

Bjorn Lindahl has studied the so-called nitrification that occurs when purified waste water is released from the waste water plant. Nitrification is the conversion of ammonia in waste water to nitrates and acidified hydrogen ions.

"The production of hydrogen ions has gone unnoticed in this process, while attention has been focused on oxygen demand," Bjorn Lindahl said. This may explain why no one has thought of this before.

"The oxygen demand has a much more tangible effect, since it can cause an extremely foul odor."

Bjorn Lindahl has made an extensive search of the scientific literature for information on the effects of acidification resulting from nitrification, but found only rare mention of it and never in connection with emissions from purification plants.

1,600 Tons

"I cannot explain it other than to say that researchers have concentrated so much on oxygen demand that they have not given a thought to the risk of acidification," Bjorn Lindahl said.

In other areas, however, the nitrification phenomenon is well known and there is no doubt that the process occurs in this manner, Lindahl stressed in his report.

Bjorn Lindahl's calculations on acidification from waste water plants show that about 1,600 tons of hydrogen ions are released annually into various streams and lakes in Sweden.

The annual sulfur fallout from domestic and foreign stacks corresponds to about 30,000 tons of hydrogen ions. This means that 5 percent of the acidification comes from waste water plants.

Remedy

Based on sulfur emissions both originating in Sweden and falling within the country's boundaries, acidification from municipal waste water facilities amounts to one fourth of the total.

"This fourth can be located and eliminated readily," Bjorn Lindahl said.

According to Lindahl, it would be sufficient to add lime to increase the pH before the waste water is released. If the plant possesses facilities for chemical precipitation, the lime may be used as a precipitating agent.

Only 25 g lime daily per person served by the treatment plant would be required. The cost is not especially high and in many cases no changes in the treatment plant would be needed.

"In my opinion, lime must be added to the lakes and streams most affected by acidification in southern and western Sweden," Bjorn Lindahl said.

9336

CSO: 5000/1234

TREE GROWERS PROTEST BILL TO PROTECT DECIDUOUS FORESTS

Stockholm DAGENS NYHETER in Swedish 30 Jun 82 p 11

[Article by Cecilia Steen-Johansson]

[Text] The country's deciduous forests must be protected, according to the Environmental Protection Board. A bill will be introduced to protect remaining deciduous forests.

Protests already are being heard, however, primarily from Scanian farmers and forest owners who believe the present forestry laws and bureaucracy are sufficient.

"Our deciduous forests are threatened," said Rune Frisen, director of the Environmental Protection Board's natural resources section. "They are not considered profitable and are in jeopardy of being replaced to a great extent by spruce forests. We want to prevent this by law and by economic support for new plantings."

At present there are about 110,000 hectares of deciduous forests in Sweden, mostly in Scania, Halland, Blekinge, and Malardalen. Each year about 700 hectares disappear. Beech and oak are the most common species, but there also are some linden, ash, elm, and maple forests.

0.5 Percent

Even though there are few deciduous forests in Sweden, they are extremely valuable to animals and plants. It is estimated that about one third of the country's endangered forest plants are dependent on deciduous forests, as are 99 of 128 beetle species that are threatened with extinction--to name only a few examples of the biological significance of deciduous forests.

Nevertheless, they account for only 0.5 percent of the country's total forest area.

"The purpose of the law is to stimulate forest owners to care for deciduous forests," Rune Frisen said. "They must be replaced with new plantings when they are cut."

"There must be some limit to the legislation," said Torvald Persson of the Scanian Forest Owners' Association. The farmers are best at protecting the environment and they already feel hard pressed by all the regulations. A new law would mean only unnecessary and expensive bureaucracy."

Unnecessary

Jan-Ake Lunden of the Southern Forest Owners' Association in Vaxjo agreed.

"Of course, we must take care of our flora and fauna," he said, "but individual forest owners must not suffer. It could be reasonable to include protection for deciduous forests in the forestry protection law, but a separate law is unnecessary in our opinion."

"We hope to have the same positive results from this legislation that we had from the beech forest law of 1974," Rune Frisen said. "We will recommend that the two laws be combined into one. The environmental protection division of the provincial governments then would decide whether or not a particular deciduous forest could be replaced by spruce forest. We are striving for a division of responsibility between environmental protection and forestry."

One problem is that hardly any deciduous trees are cultivated in this country. It may be difficult finding good plants for new plantings.

Carl Piper, one of the largest forest owners in Scania, believes that the proposal is reasonable.

"The beech forest law has been successful," he said. "We need help preserving deciduous forests. They are valuable to both humans and animals, so we want to save them."

In its study, the Environmental Protection Board stressed that deciduous forests also could be profitable. Sweden imports much hardwood for furniture, for example beech from Denmark. Cultivation there results in higher quality. Oak for plywood, for example, is extremely profitable on the market.

9336

CSO: 5000/1234

END